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(71) Applicants Iain McGarry, 30 Crathes Close, Stenton, Glenrothes, Fife, Scotland.
(72) Inventors Iain McGarry
(74) Agents Fitzpatricks, 48 St. Vincent Street, Glasgow G2 5TT.

(54) Sanding attachment for a power tool

(57) A sanding attachment for a power tool comprises means 1,2,3 for attachment to a rotary drive shaft of a power tool. A circular casing 5 is coaxial with the attachment means and rotatable therewith. A bearing 6 is mounted within the casing eccentrically of the attachment means. A circular disc 9 is mounted on the bearing for rotation about its axis relative to the casing. The circular disc has a circumference wholly containing within it the circumference of the circular casing. A face 10 of the disc remote from the attachment means is for cladding with abrasive material. Eccentric weight means 11 are mounted in the casing for counterbalancing purposes. In use, depending upon the pressure applied to a surface to be sanded, the disc describes a rosette

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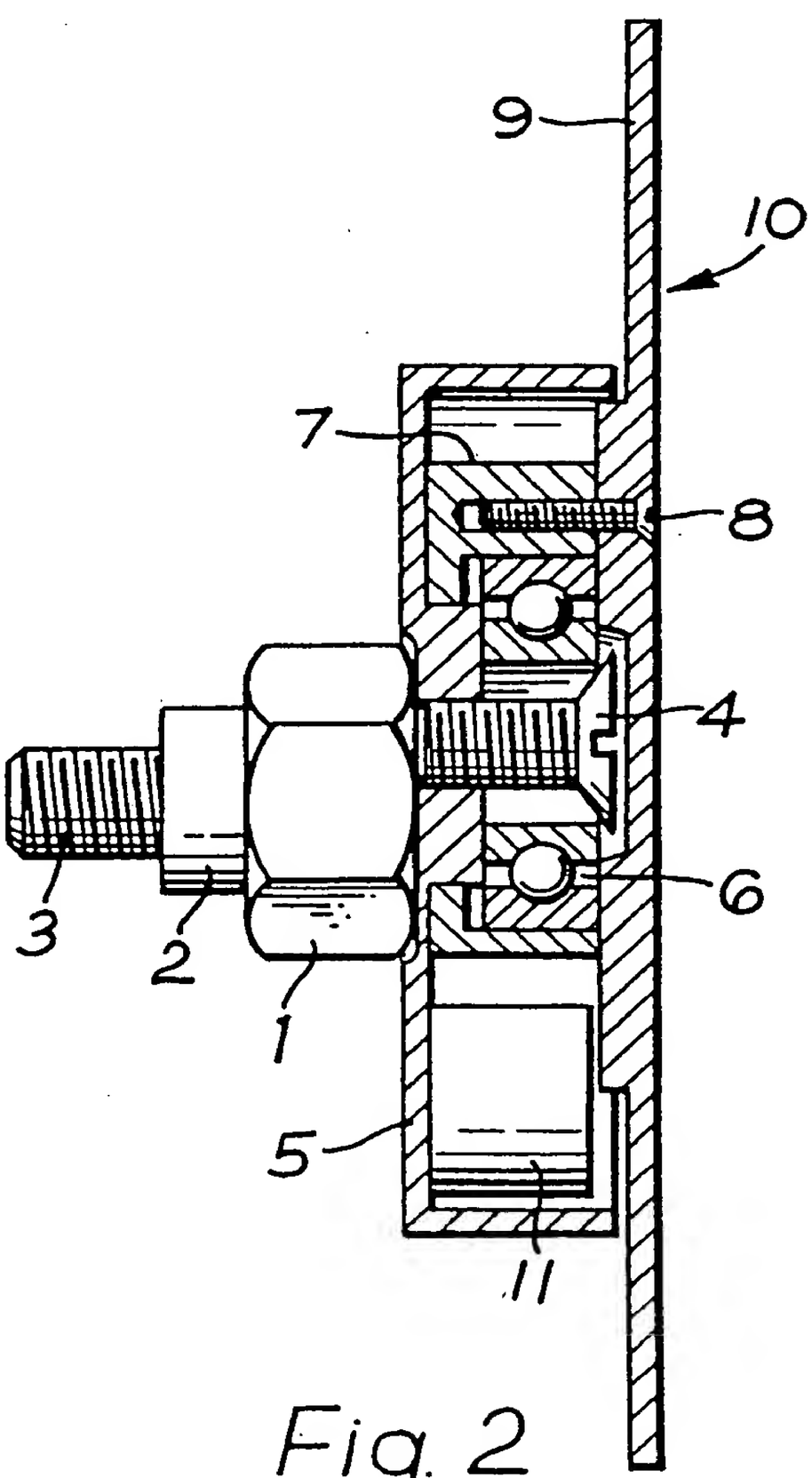

Fig. 2

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motion whereby to obtain an improved surface finish. Since the disc itself does not rotate the risk of injury or damage is minimised.

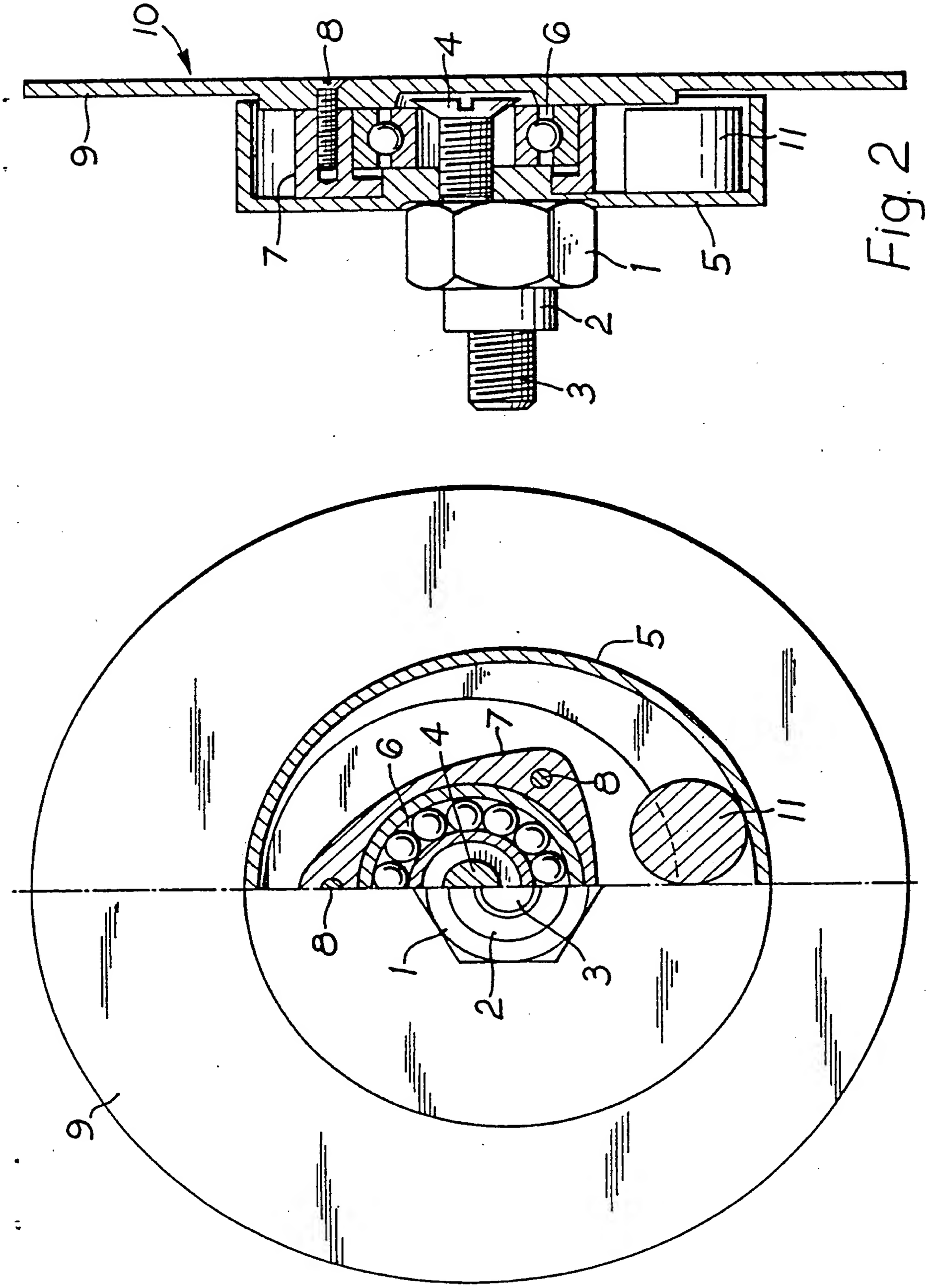

Fig. 2

Fig. 1

SPECIFICATION

Sanding attachment for a power tool

This invention relates to a sanding attachment for a power tool.

According to the invention there is provided a sanding attachment for a power tool comprising means for attachment to a rotary drive shaft of a power tool, a circular casing coaxial with the attachment means and rotatably therewith, a bearing mounted within the casing eccentrically of the attachment means, a circular disc mounted on the bearing for rotation about its axis relative to the casing, the circular disc having a circumference wholly containing within it the circumference of the circular casing and having a face remote from the attachment means for cladding with abrasive material, and eccentric weight means mounted in the casing.

An embodiment of the invention will now be described, by way of example, with reference to the accompanying drawings, in which:-

Figure 1 is a view, partially in section, of a sanding attachment looking from the side thereof for attachment to a power tool; and

Figure 2 is an axial section of the sanding attachment shown in Figure 1.

Means for attachment to the rotary drive shaft of a power tool comprises a hexagonal head 1 in one side of which is received an insert 2 having extending therefrom a male screw-threaded member 3 intended to be screwed into a female screw-threaded end of the drive shaft of a power drill which end normally mounts a chuck. Alternatively, the insert 2 may be replaced by one having a female screw-threaded member for receiving a male screw-threaded end of the drive shaft of a power drill.

On the other side of the head 1 there is received a screw 4 the axis of which is eccentric to the axis of the common axis of the items 1, 2 and 3. A circular casing 5 has its axis concentric with the axis of the items 1, 2 and 3 and a bearing 6 is mounted in a bed 7 within the casing 5 with its axis concentric with the axis of the screw 4 by which the inner race is secured. The bed 7 secured by small screws 8 to a circular disc 9. The axis of the disc 9 is concentric with the common axis of the screw 4 and the bearing 6 and its circumference wholly contains the circumference of the casing 5. The face 10 of the disc 9 is intended to have a foam backing onto which may be adhesively secured a sheet of abrasive material. Mounted within the casing 5 on one side of the bearing 6 and bed 7 are eccentric weight means 11.

In operation, the items 1, 2, 3 and 5 are rotated about their common axis. The screw 4 and the inner race of the bearing 6 thus orbit on their common axis about the common axis of the items 1, 2, 3 and 5, the eccentric weight means 11 being intended to dynamically counter-balance the bearing 6, the bed 7 and the disc 9. Depending on the pressure applied to the surface being sanded the abrasive sheet on the face 10 of the disc 9 describes a rosette motion by means of which an improved surface finish is obtained compared with the normal rotary sanders. If the pressure applied is too great the disc 9 merely remains stationary on the surface being worked. Also since the disc 9 does not rotate itself the risk of injury or damage to the operator, clothing or power cable is minimised.

CLAIMS (Filed 30 Sept 1981)

1. A sanding attachment for a power tool comprising means for attachment to a rotary drive shaft of a power tool, a circular casing coaxial with the attachment means and rotatably therewith, a bearing mounted within the casing eccentrically of the attachment means, a circular disc mounted on the bearing for rotation about its axis relative to the casing, the circular disc having a circumference wholly containing within it the circumference of the circular casing and having a face remote from the attachment means for cladding with abrasive material, and eccentric weight means mounted in the casing.

2. A sanding attachment for a power tool, substantially as hereinbefore described with reference to the accompanying drawings.

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